

REMARKS

Currently pending under examination are claims 1, 3-11 and 22-35.

The Applicants thank the Examiner for his indication that claims 10, 29, and 33-35 are directed to allowable subject matter. Reconsideration of the rejected claims is hereby requested.

Independent claim 1, and dependent claims 3-9, 11, 22-28, 30-32 were rejected under 35 U.S.C. §102(e) or 34 U.S.C. §103 as being anticipated by or obvious over U.S. No. 7,030,452, to Tao et al. in view of U.S. No. 5,071,832, to Iwamatsu; U.S. No. 5,219,826, to Kapitulnik; and U.S. No. 5,407,868, to Peters.

The invention as recited in independent claim 1 is directed to a method for controlling a gap in an electrically conducting solid state structure. A plurality of electrically conducting features are provided, disposed on a membrane that includes an aperture which is aligned with a gap between the features. The electrically conducting features are exposed to a fabrication process environment the conditions of which are selected to alter an extent of the gap. A voltage bias is applied across the gap during process environment exposure of the structure. The electron tunneling current across the gap is measured during the process environment exposure of the features to indicate an extent of the gap. The process environment is in turn controlled during process environment exposure of the structure, based on the tunneling current measurement, to control an extent of the gap.

Claim 1 has been amended to include the limitation of allowable claim 10 that there be provided a membrane including an aperture aligned with a gap. This gap is provided, as recited in amended claim 1, between a plurality of electrically conducting features. This recital of electrically conducting features is described in the instant specification as-filed at paragraphs [0110], [0111], and [0114], for example.

With this amendment, independent claim 1 and all dependent claims include the limitation of allowable claim 10 of a membrane having an aperture that is aligned with a gap between elements on the membrane.

Claims 4, 5, 9, 26, 27, 30, 33, 34, and 35 have been amended to correspond with the amendments to claim 1. Claim 11 has been cancelled.

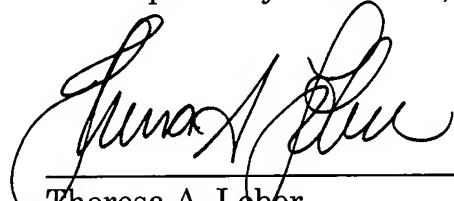
The Applicants respectfully submit that the claims are now in condition for allowance, which action is requested.

A supplemental Information Disclosure Statement accompanies this response.

If the Examiner has any questions or would like to discuss the claims, he is encouraged to telephone the undersigned Agent at the phone number below.

Respectfully submitted,

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